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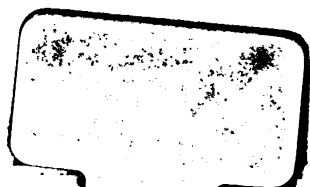
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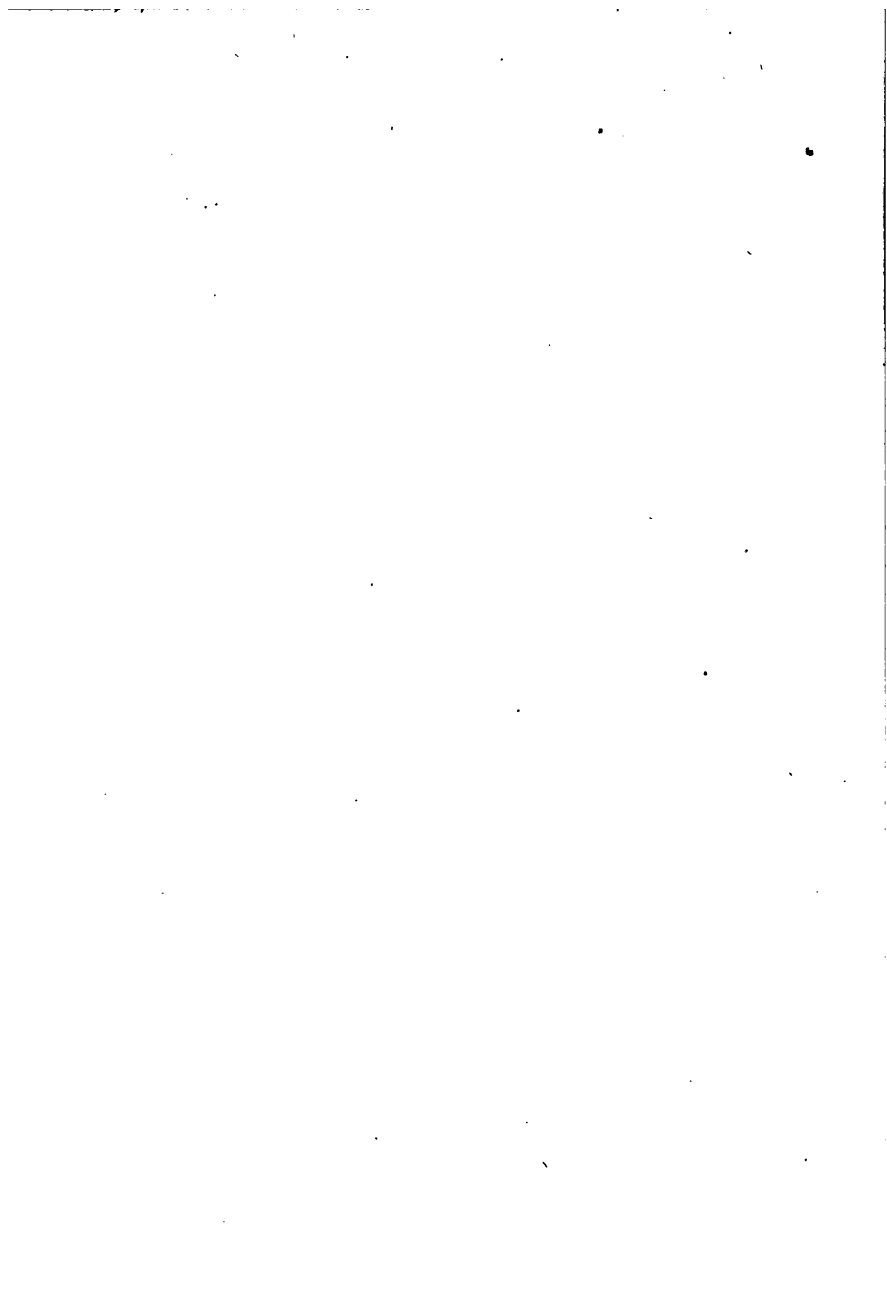
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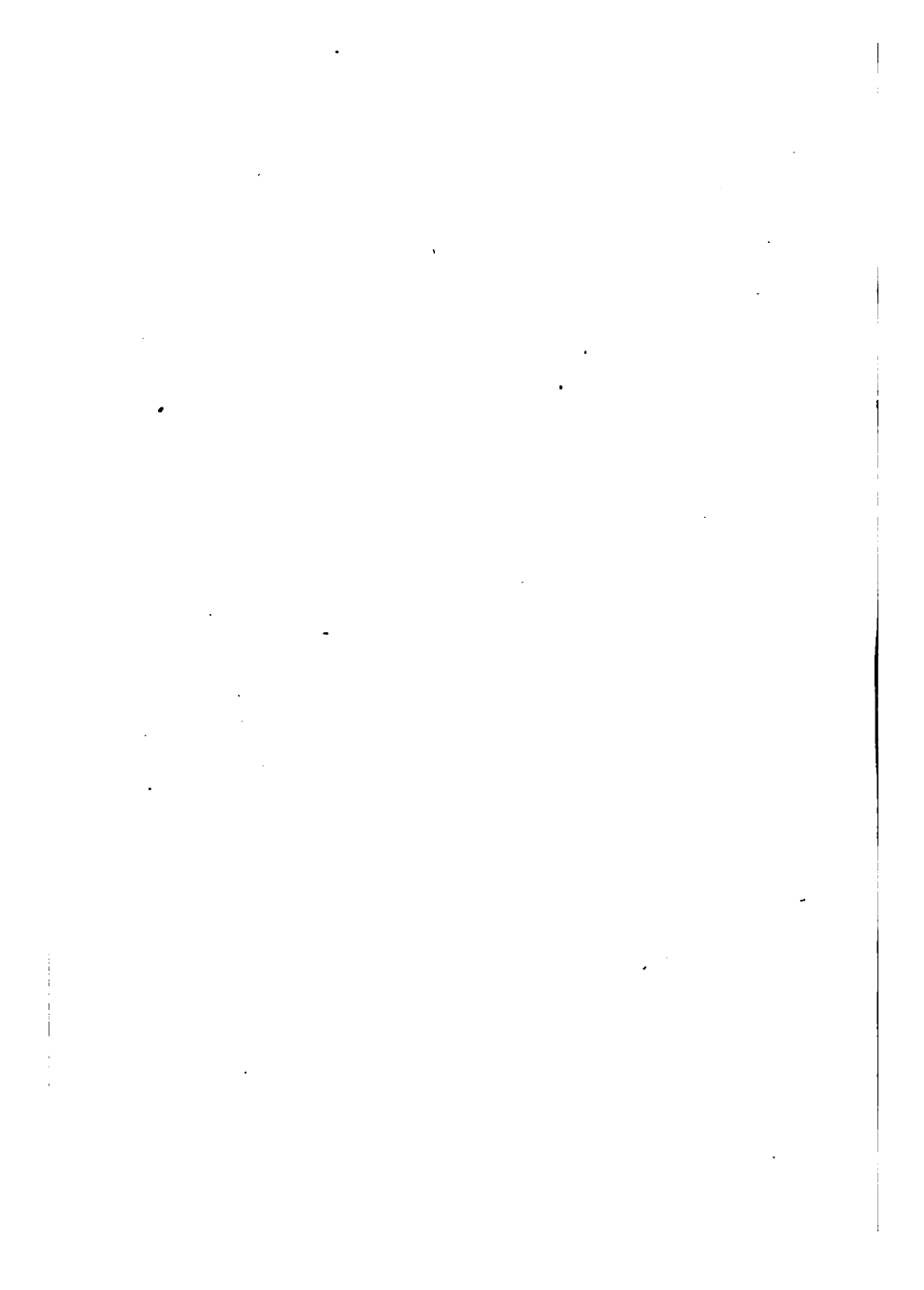
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GEOGRAPHY FOR LITTLE CHILDREN

THE LONDON GEOGRAPHICAL SERIES.

GEOGRAPHY.
FOR
LITTLE CHILDREN

BY ANTONIA ZIMMERN

SECOND EDITION, REVISED

Maps and Illustrations

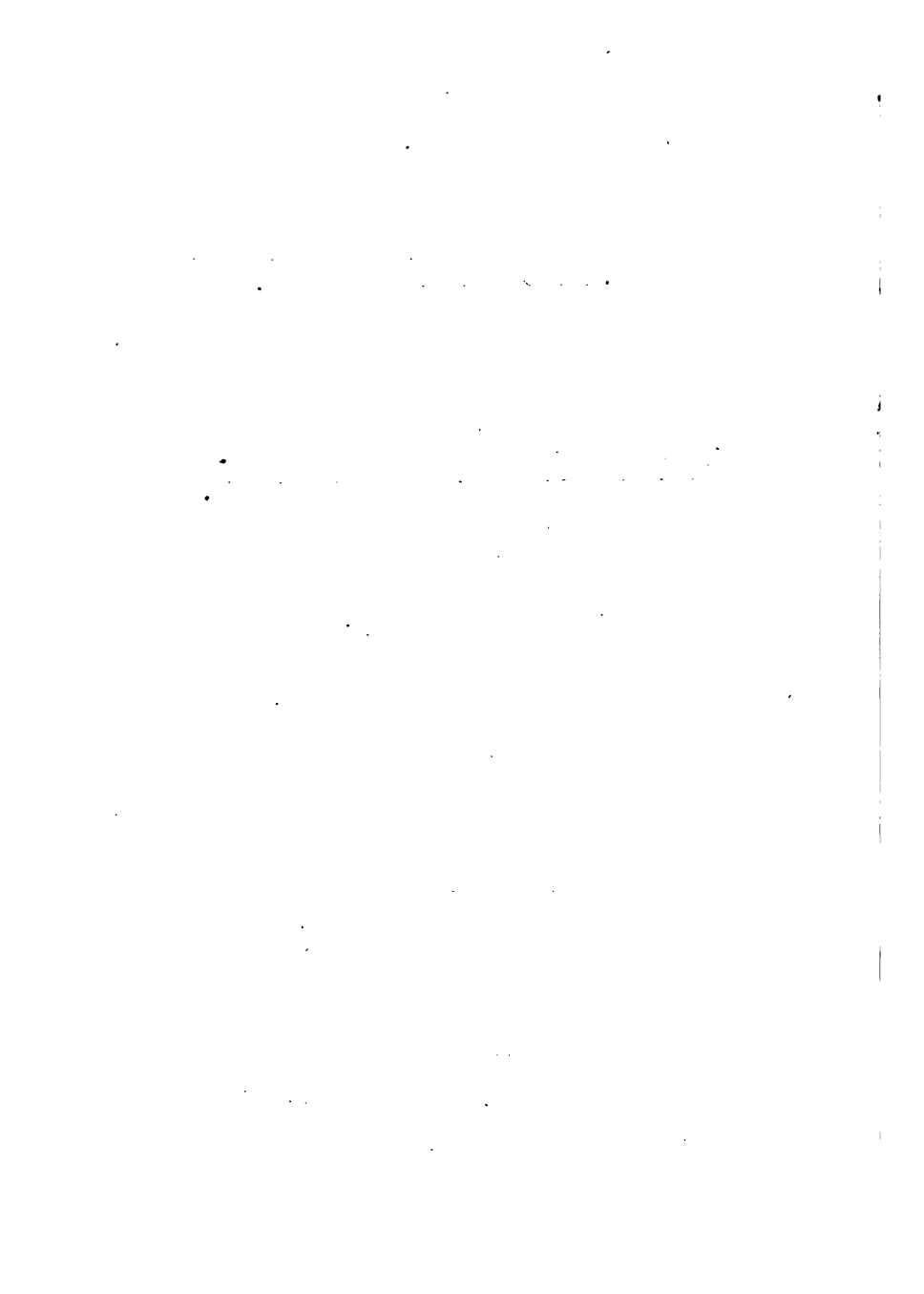


LONDON

EDWARD STANFORD, 55 CHARING CROSS, S.W.

1880

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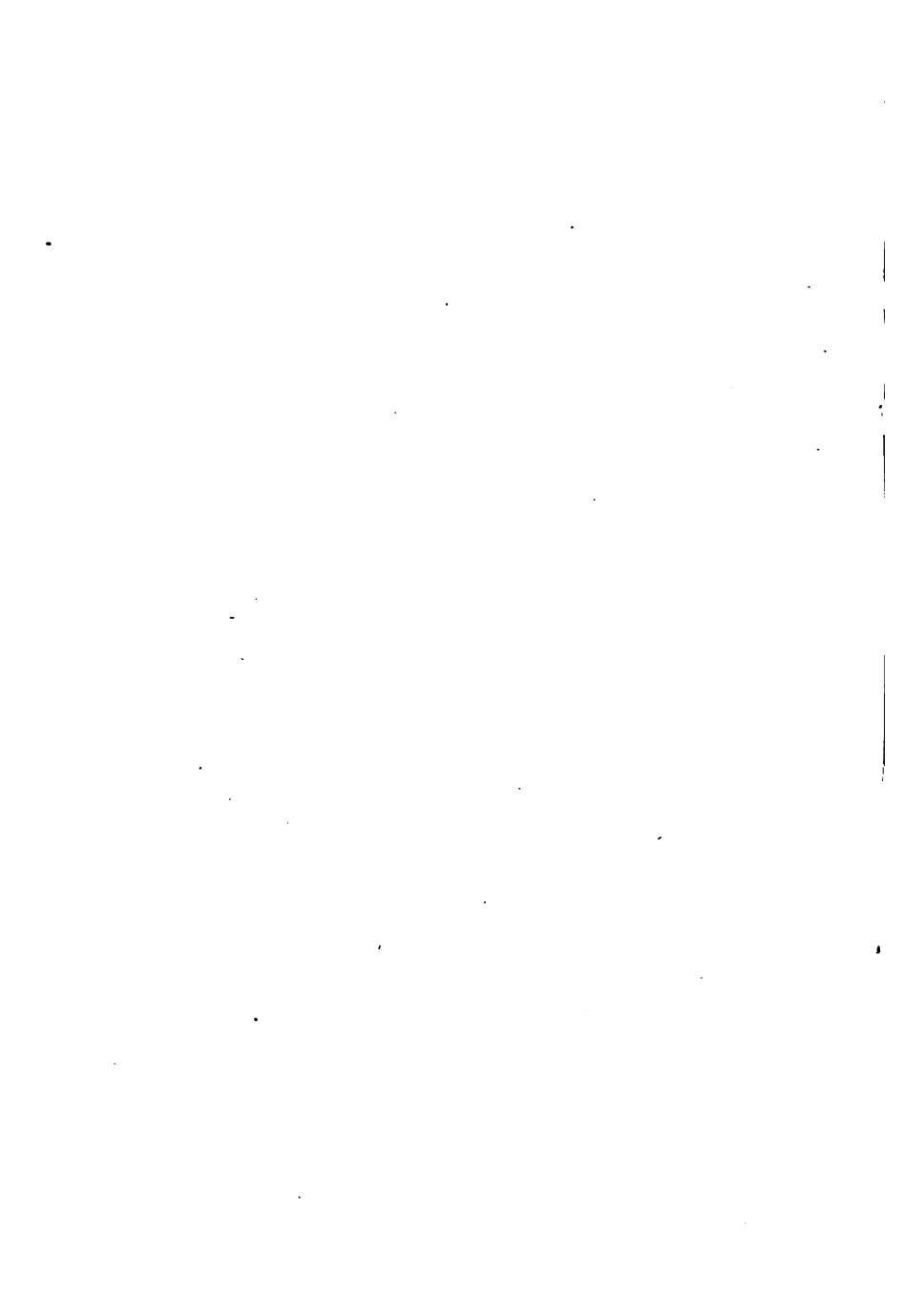


TO

DOLLY, FANTIE, & TOO-TOO

I DEDICATE

THIS LITTLE BOOK



PREFACE.

I VENTURE to hope that this little book may supply a want of which I have heard many people complain. Books such as the Primers of Geography are too advanced to be used in teaching young children ; while “ Elementary Text-books ” and “ First Geographies ” are, for the most part, mere lists of names.

Now if, as I think most people would grant, it is better to learn names direct from the map, while Political Geography can only be understood in connection with history, then surely the *sole* object of the earliest instruction in Geography should be to show children how to use a map, and to teach them a little of that elementary Physical Geography which

forms the basis of all knowledge about the earth.

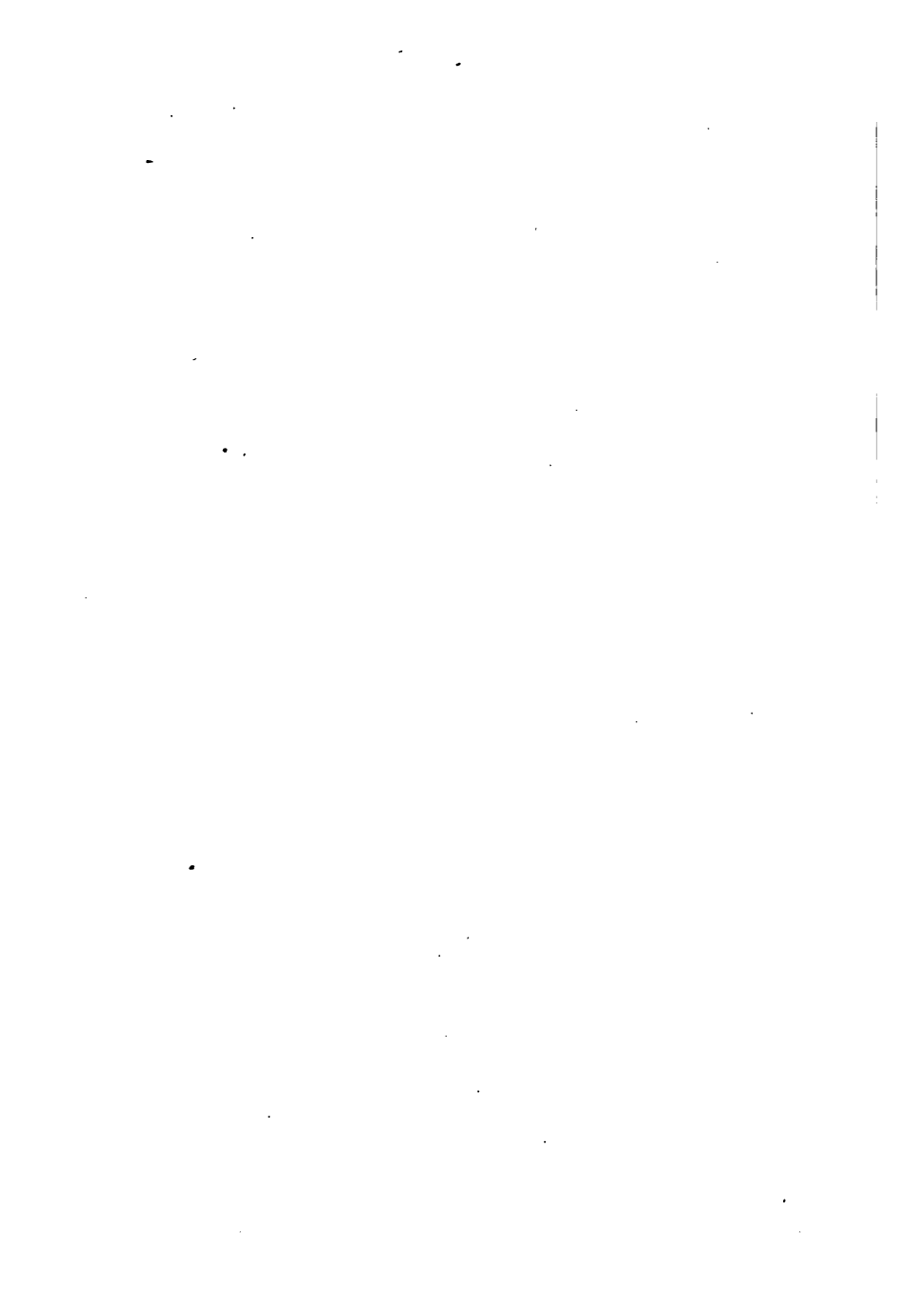
With this aim in view I have written these few chapters. The children should have a globe and some good, clear maps; then they can answer the questions set in the Map Exercises, and thus find out for themselves the names they ought to know.

ANTONIA ZIMMERN.

LONDON, 1880.

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CHAPTER I.

INTRODUCTION.

THIS little book is to tell you something about the beautiful earth on which we live. You would see many wonderful things if you could travel all over the world, but you may learn a great deal without going very far from home.

You know that the land is not everywhere alike. In some parts it is hilly, and in others flat; in some parts it is covered with trees, grass, or cornfields, and in others it is rocky and bare. In England, the country we live in, you cannot go far without coming to some water, such as a *pond*, or *brook*, or *river*, and no part of England is very far from the *sea*.

Now, could you travel over land and water, you would never come to any end or edge, and if you went on and on in a straight line in any direction, you would at last return to the place from which you started.



FIG. 1.—THE SEA.

This is because the earth is shaped like an orange, and you know that if a fly crawls in one direction on an orange or ball, it must come round again to the place where it began its journey. Though our earth seems flat like the table or the floor, yet it is really round and full like an orange or ball. The very small piece of it we can see at a time looks flat, because the ball we live on is very large indeed; so large, that the highest mountains on the land, and the deepest places in the sea, are nothing more when compared with it than are the tiny roughnesses on the rind of a smooth orange.

The proper name for a shape like a ball is a *sphere*.



FIG. 2.—THE EARTH.

Do you ever dig in your garden, and have you wondered what you would find if you could get below the soft brown mould in which the flowers grow? Under the mould you might see gravel or clay, and people who have dug a long way down have come to all kinds of rocks and stones; still men have

got no nearer to the middle of the earth than you would get to the middle of an orange if you made a scratch with a knife on the skin.

All round and about us, over land and water, and reaching up far above us, is the air we breathe, and without which neither animals nor plants could live.

Now try and think of the earth as an enormous ball, into which people have only been able to dig a very little way. On the *surface* or outside of this ball there is about three times as much water as land, while the whole is surrounded by a shell of invisible air.

CHAPTER II.

MAPS.

If you wanted to explain the exact shape of your schoolroom, the best way would be to draw a plan; and to understand what a plan is, you had better try to make one.

Measure the length of one side of your room. We will suppose that it is six yards long. You must draw a line on your paper to stand for that side, but how long ought your line to be? Now you can make it as long or as short as you please, if only you settle what length of line on the paper shall stand for a certain length of the wall. For instance, if you make your line three inches long, then every inch on the paper will stand for two yards, and the *scale* of your plan will be an inch to two yards, as in Figure 3. If you make your line one inch and a half long, then every half-inch will

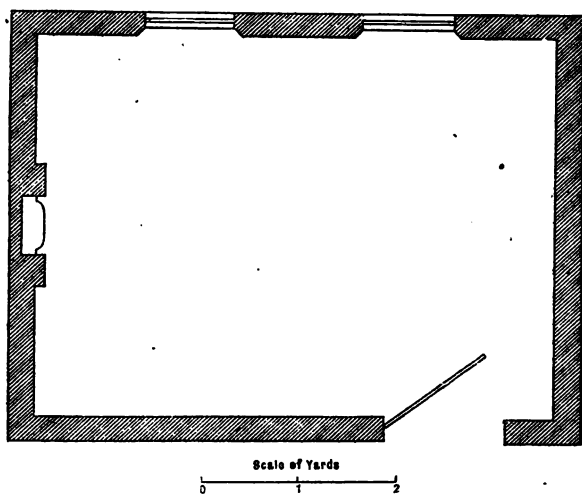


FIG. 3.

stand for two yards, and the scale will be half an inch to two yards, as in Figure 4 ; and so on.

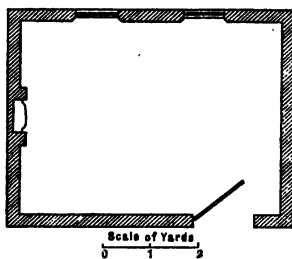


FIG. 4.

Having settled what length your first line shall be, measure the next wall and draw the line of a proper length. It must meet the first line in such a way that the two lines make a corner, the shape of the corner of the room. Go on in this manner till you return to the corner from which you started. Your plan will show the *shape* of your room. Now if you draw a line on the side of the paper the length you took to represent two yards, and write below it "Scale of yards," then other people will also be able to find out the exact *size* of your room.

A plan of any part of the surface of the earth is called a *map*, and we cannot learn about the earth without maps to show us the shape and size of countries and the exact position of places. On the next page is a map of the British Isles.

The unbroken outside line shows you the shape of the country.

The short thick lines close together stand for hills, or for those higher hills which are called *mountains*.

The black, wavy lines stand for rivers.

The dots stand for towns.

Since the earth is a ball, a plan of the whole



Fig. 5.—MAP OF BRITISH ISLES, with Mountains, Rivers, and Towns.

earth may be a ball also. Such plans are called *globes*, and you will find a globe very useful to help you to learn about the earth.

On a flat map of the whole earth, like the one on the next page, the globe is supposed to be cut in half, and pulled and stretched, so that the two halves lie flat side by side. You can see on a globe or on this map that all the seas are joined together, but that most of the land lies in two large masses, much broken up by the way the sea runs into them. The rest of the land is in small patches which are surrounded by water. These are



FIG. 6.—AN ISLAND.

called *islands*. Here is a picture of a small

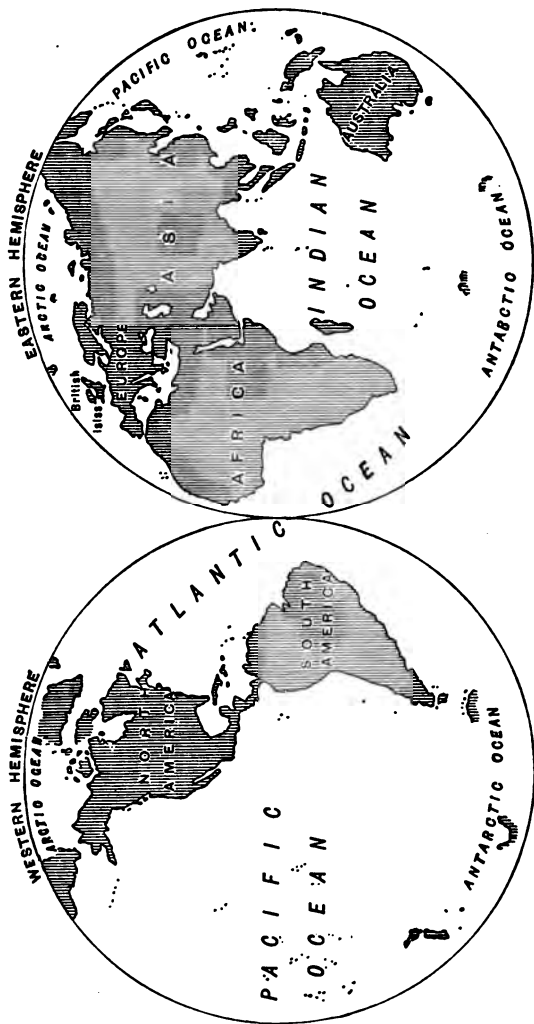


FIG. 7.—EASTERN AND WESTERN HEMISPHERES.

island. England is joined to a country called Scotland, and the two together form the large island of Great Britain.

The mass of land on the right-hand side of the map of the world is divided into three parts: Europe, Asia, and Africa.

The mass of land on the left-hand side is divided into two parts: North America and South America.

These divisions are called *continents*. Europe is the smallest of these continents, but it is the most important to us, because Great Britain is an island belonging to Europe.

One very large island, called Australia, which is nearly opposite to England on the globe, is sometimes also called a continent.

The sheets of water between the masses of land are called *oceans*.

MAP EXERCISES.

1. Draw a plan of your schoolroom.
2. Learn the names of the oceans from the map on p. 10.
3. Take a globe or map and look for any places the names of which you know.
4. Which map is on the larger scale; the one on p. 8 or the one on p. 10? Find out by looking at the size of England in both maps.

CHAPTER III.

POINTS OF THE COMPASS. EQUATOR. POLES.

ON which side of England does Scotland lie? There are four words, *north*, *south*, *east*, and *west*, which people use to explain where one place is with regard to any other, and these are called the points of the compass. We can find them out by looking for the sun at different times of the day. For instance, the sun rises

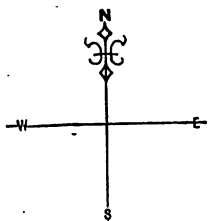


FIG. 8.

in the east and he sets in the west, opposite to where he rose. Draw a line pointing east and west, then a line drawn across it will point north and south.

If you face the sun in England at midday (twelve o'clock) you will be looking south.

This is a better guide than the sun's rising and setting point, for he does not always rise exactly in the east or set exactly in the west.

Having found one point, you can easily find all the others. When you are looking south everything behind you is north, everything on your right hand is west, and everything on your left hand is east of you.

Some night when the stars are shining ask somebody to point out the Pole-star, for when you face that you are looking due north, and

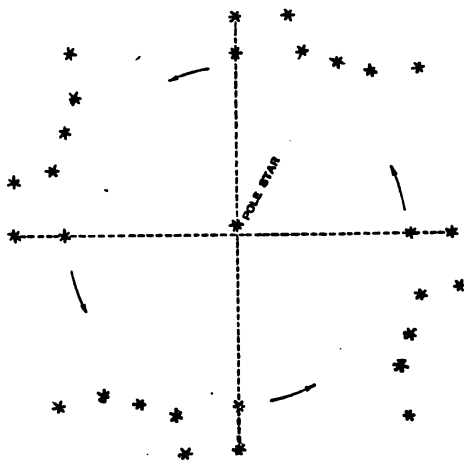


FIG. 9.—The POLE STAR and the GREAT BEAR. The Great Bear drawn in four different positions.

that is the way you are supposed to look when you hold a map straight before you. Maps are usually made in such a way that the

top is the north, the bottom the south, the right hand the east, and the left hand the west.

Now, as Scotland is higher up on the map than England, you must say that it lies to the north of England.

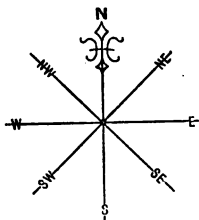


FIG. 10.

London, the *capital* or chief town of England, is more to the south than the north, and more to the east than the west; it is therefore said to be in the south-east of England.

The most northerly point in the world is called the *North Pole*, and the most southerly, the *South Pole*. In any fixed globe the points at which the globe is fastened stand for the Poles, the one at the top for the North Pole, and the one at the bottom for the South Pole. Half-way between these there is a thick line drawn round the globe, which divides it into two equal parts; this line is called the *Equator*. Of course there is not really any such division on the earth, but the imaginary line helps us to explain where places are. The two half-balls or *hemispheres* into which

this line is supposed to cut the earth are called the Northern and the Southern Hemispheres.

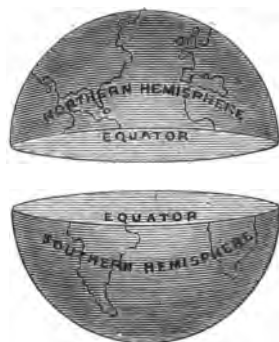


FIG. 11.

On the map of the world (see p. 10), the

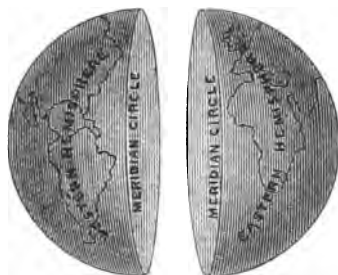


FIG. 12.

globe is divided another way. These parts

are called, for convenience, the Eastern and the Western Hemispheres.

MAP EXERCISES.

1. Find out the north, south, east, and west with regard to your home or school.

2. How does Great Britain lie with regard to the mainland, or principal land, of Europe?

3. What is the name of the large island that lies to the west of Great Britain?

4. Is England in the Northern or the Southern Hemisphere? in the Eastern or the Western Hemisphere?

5. Take a map of Europe and find out the names of the principal countries.

CHAPTER IV.

DAY AND NIGHT. ZONES. CLIMATE.

We all speak about the rising and setting of the sun, but really it is the earth that moves, and not the sun. Let a candle stand for the sun and an orange for the earth. Put a knitting needle through the orange, and mark a small black spot on the rind to represent England. Then spin it round before the lighted candle, and you will see that the black spot on your orange is sometimes in the light and sometimes in the dark.

When we are whirling swiftly and smoothly along in a railway carriage, it often seems as if the houses and trees were running away and we were standing still. In the same way it appears as if the sun were travelling across the sky, while it is really the earth that is spinning rapidly round, so that every place is sometimes turned towards the sun and

sometimes turned away from him. The earth turns round once in twenty-four hours, which make a complete day and night, and, as it moves from west to east, it is in the east that we first see the sun.

At the Equator the day and night are always each twelve hours long, but the nearer we get to the Poles the greater is the difference between the length of the days in summer and winter. In England we have sunlight for about sixteen hours in June, and eight hours in December. At the Poles there is only one day and one night in the year, each six months long.

The hottest parts of the earth are near the Equator, where snow and ice are seldom seen. I daresay you have heard of people going southwards to countries where the winters are less cold than in England and the summers sunnier and brighter. We who live in the Northern Hemisphere get to warmer places when we go southwards, but the people who live in the Southern Hemisphere, on the other side of the Equator, would have to go northwards to seek hotter lands.

When we speak about the *climate* of a

place we mean the usual weather there ; hot or cold, and wet or dry. Now, the further we go away from the Equator, whether north or south, the colder do we find the climate on the whole, till near the Poles there is always snow and ice on land and sea.

If you look at the globe you will see two dotted lines at equal distances from the Equator

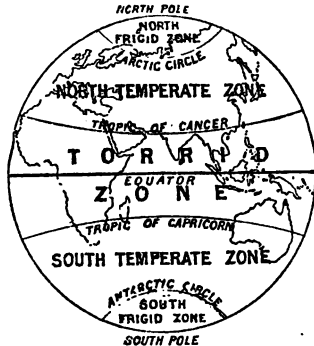


FIG. 13.—THE ZONES.

tor. The one to the north is called the Tropic of Cancer, and the one to the south the Tropic of Capricorn. Not far from the North Pole you will find a dotted line called the Arctic Circle, and not far from the South Pole a dotted line called the Antarctic Circle. These

four lines divide the surface of the earth into five belts or *zones*; the *Torrid* or hot zone on each side of the Equator, two *Frigid* or cold zones round the Poles, and two *Temperate* zones which are neither very hot nor very cold.

Of course there is no sudden change when we pass from one zone to another, but these divisions, like others of which I have told you, are used on globes and maps because they are convenient.

In the hot countries of the *Torrid* zone there are dense forests of palms, and grasses and ferns as tall as trees. Lions, tigers, monkeys, and many other wild animals that we only see in zoological gardens here, are found in these warm lands.

In the *Frigid* or cold zones, on the other hand, where the ground is frozen for a great part of the year, few trees or flowers can grow. The cold countries are the home of the white fox and the polar bear, and of birds with feathers as white as the snow.

Those plants and animals which we see around us belong to the temperate countries of the earth.



FIG. 14.—AN ARCTIC SCENE.

You will find many lines on the globe and on ordinary maps besides those of which I have told you, and you will learn about them when you are older. It will be enough if you remember for the present that they are all drawn to map out the surface of the earth, and to help people to fix the exact position of places.

MAP EXERCISES.

1. In which zone is England?
2. Find out some places in the Torrid zone ; in the N. Temperate zone ; in the S. Temperate zone ; in the Frigid zones.
3. What countries of Europe are partly within the N. Frigid zone ?
4. Find out a country in which it is night when our side of the earth is turned towards the sun.

CHAPTER V.

ENGLAND. BOUNDARIES ; COAST-LINE ; SIZE.

THE part of the Atlantic Ocean to the east of England is called the North Sea, and the part to the south the English Channel. *Channel*



FIG. 16.—A STRAIT.

is the name given to a narrow passage in the ocean, and a still narrower passage, like the one in the picture, is called a *strait*. Thus the North Sea and the English Channel are

joined by the Strait of Dover, so named after the sea-side town Dover in the south-east of England. The northern part of the sea that lies between England and Ireland is called the Irish Sea, and the southern part is called St. George's Channel.

These parts of the sea form the eastern, southern, and western *boundaries* of England; and on the north England is bounded by Scotland.

The *coast-line* of England, or edge of the land that touches the sea, is very long, because it is not straight as it is in some countries, but winds in and out, so that the sea makes its way far inland.

Inlets of the sea are called by many different names. Those that are large and deep are generally called *gulfs*. Inlets formed by a bend in the coast are often called *bays*, such as Cardigan Bay on the west coast of England. Inlets, where ships can lie in safety and be sheltered by the land from the stormy waves, are called *harbours* or *havens*, such as Portsmouth Harbour on the south coast, and Milford Haven on the west.

Land jutting out into the sea is called by



FIG. 17.—A HARBOUR.

many different names, such as a *cape*, or *head*, or *point* ; or *ness*, *naze*, or *nose*.



FIG. 18.—A HEADLAND.

Sometimes the land rises out of the water in steep, high cliffs, and in this case the coast is called *rocky*.



FIG. 19.—A ROCKY COAST.

Sometimes it slopes gently upwards and is not very much higher than the surface of the sea, and such a coast is called flat.

On a rocky coast we can see some of the harder substances that lie under the soft brown vegetable mould. Near Dover, for instance, the rocks are formed of chalk, and in some parts of Great Britain they are made of the hard rock called granite.



FIG. 20.—A FLAT COAST.

Though the edge of the land is much straighter in some countries than it is in England, yet it is nowhere perfectly straight for more than a very short way; only the inlets of the sea are often too tiny to be marked on the map.

Have you ever watched the waves beating against the shore and wearing away the cliffs by hurling vast masses of water and showers of pebbles against them? If you have seen the sea thus tearing down the land, you will not wonder at the ins and outs of the coast; but I should tell you that there are places here and there, where the sea washes land up to the shore instead of dragging it away.

By the help of any map on which the scale is given (see p. 23) you can find out the distance between different places. Let us suppose that you measure along your scale and cut a strip of paper to stand for ten miles; then if you want to know how far away some town is from London, for instance, you have only to see how many strips of paper of that length will lie between the two places on the map.

By measuring in this way you will find that from Lizard Point, a cape in the south of England, to the town Berwick, on the borders of Scotland, is a distance of 425 miles, and that from Land's End, the most westerly cape, to the South Foreland, a cape near Dover, is a distance of 320 miles. England is therefore 425 miles long and 320 miles broad. Most people can walk an English mile in about twenty minutes. If a man could set out from Lizard Point and walk day and night in a straight line to Berwick, he would reach that town in about a week. Of course if anybody were really to try to walk this distance it would take him a great deal longer, not only because he would be obliged to stop and rest, but also because the road would probably not be in as

straight a line as we have imagined. It would be a journey of several days on horseback, and only by an express train could so many miles be passed over within four-and-twenty hours.

Yet, when you look at the map, you see that England is very small compared with the mainland of Europe, and that Europe is small compared with the other continents; so this may give you some idea of the great size of the world.

MAP EXERCISES.

1. Name the boundaries of some of the countries of Europe.
2. Trace the coast-line of Great Britain, and name some of the inlets and headlands.
3. Trace the coast-line of Ireland, and name some of the inlets and headlands.
4. Name the principal islands and island-groups near the shores of Great Britain.
5. Find out the length of Great Britain.
6. Measure the distance between any places you know.

CHAPTER VI.

ENGLAND. RIVERS.

HAVE you ever watched the water running in tiny streamlets down a sloping road, and making a little channel for itself as it winds between the stones during a heavy shower of rain? If you follow one of these streams for a little distance, you will probably see others join it and make it deeper and wider. Now you may learn a great deal about rivers by watching these little streamlets that you can see anywhere in town or country on a rainy day.

Where does the water come from? The rain falls on to the ground, part of it sinks in and wets the soil, part runs off the surface. The water that runs off the surface makes the little streamlets. Why does the water run at all? Why does it not stay where it falls? It does stay where it falls when the ground is flat, and then it makes pools or puddles, but

the ground is seldom perfectly flat, and water, as you know, will run off a sloping surface and trickle down to the lowest place it can find, and as the ground is never quite smooth, and the water takes the lowest path, it curves in and out on its way.



FIG. 21.—A RIVER.

Now the only real difference between a large river and a tiny wayside streamlet is this; the streamlet dries up after the rain is over, but you see the water in the rivers always

flowing, whether it has just been raining or not.

The rain runs off the slopes of a country in tiny rills, these join together to form little brooks, and many brooks unite their waters till they become a great, strong, rushing river, which gets wider and deeper the further it goes, because it constantly receives water from all sides.

But how is it that all the rills formed by the rain water do not dry up when the sun shines, like our wayside streamlets, before they have a chance of forming brooks and rivers?

In the first place, though the wayside streamlets disappear, yet their water does not dry up entirely. Before the rain has ceased, before the rays of the sun have had time to suck up the wet, some of the water has no doubt found its way into the nearest brook, and is being carried onwards to swell the size of a river. In the second place, brooks and rivers are not entirely *fed*, as it is called, by the rain that runs off the surface of the land; and here we come to the chief reason of the difference between a wayside streamlet and a river.

Some of the rain sinks into the ground. It trickles into the rocks underneath the soil, and often takes long journeys below the surface of the earth. But it comes to light again



FIG. 22.—A SPRING.

at last. Sometimes it oozes out over a large space of land, and forms marshes and bogs; sometimes, and especially in hilly countries, a little jet or stream of clear water gushes out

of the earth and flows along the ground. This is called a *spring*, and since rivers are fed by springs as well as by the rain that runs off the surface, and springs seldom dry up in this country, there is nearly always water in a river, and not only in wet weather.

A river is formed by many rills and brooks and streams, but people generally choose out one rill as the starting-point of the river, and the beginning of this rill is called the *source*. The Thames and most other English rivers have their sources in springs. A smaller stream that flows into a larger one is called a *tributary* of that river.

Some of the largest rivers in the world begin as tiny rills that trickle out of the ground. Presently other rills join our first one, just as the wayside streamlets flow together; every shower of rain that falls on the land sloping towards the rill helps to swell it, and the stream of water carves out its own channel or bed, and widens and deepens it just as the wayside streamlets do.

Rivers mostly have their source in high land. Their bed is steepest, and their flow most rapid, among the hills. When the water

reaches low ground, the *current*, as it is called, becomes more gentle, and the tributaries are fewer in number, but larger than before.

What becomes of the river at last? It seeks a lower and lower level till it comes to the lowest of all, and mingles its waters with those of the sea. The place where the river runs into the sea is called its *mouth*.

The rain makes the springs and rills, and the springs and rills make the river, and the river carries the water to the sea; but what makes the rain? You know that rain falls from the clouds, but how did the clouds get into the air?

It was the sun that dried our wayside streamlet, and the sun is always sucking up water into the air from the surface of the land, from the rivers and lakes, and most of all from the sea. Wind, which is moving air, carries the sucked-up water from place to place. When there is much water in the air, we see it as a mist or cloud; when there is more than the air can hold, the cloud forms into raindrops and falls down as rain; and rain, as we have seen, at last finds its way again into the sea.

MAP EXERCISES.

1. Name any rivers you have seen or have heard of.
2. What is the name of the river nearest your home ?
3. Take a map and trace the course of any river from its source to the sea. Find out some of its tributaries.

[illegible]

FIG. 23.

CHAPTER VII.

ENGLAND. THE THAMES.

THE largest and most important English river is the Thames. It *rises*, that is has its source, on the slopes of the Cotswold Hills in the south-west of England, and is sometimes called



FIG. 24.—MAN pointing to Right Bank of River.

the Isis for the first part of its course, till it is joined by another little river called the Thame.

If you were in a boat on a river, like the

man in the picture, and were looking down the river the way the water flows, the land on your right hand would be called the *right bank* of the river, and the land on your left hand the *left bank*. The Thame is therefore, as you can see on a map, a tributary of the Thames, flowing in from its left bank.

Rivers curve in and out so much, as they seek out the lowest land on their journey to the sea, that they do not flow any one way for many miles together. It is not necessary at present to follow them in all their twists and wanderings, but we ought to be able to tell their general direction. The general direction of the Thames is from west to east; from its source to its mouth the river is about 200 miles long.

The Thames does not rise at any great height above the sea, so it has no steep slopes to dash down, and even in the upper part of its course the current is gentle and smooth. When a river is deep enough and flows slowly enough for ships to sail up and down it, it is said to be *navigable*, from a Latin word *navis*, a ship. The Thames is navigable for small boats and barges very nearly all the way up to

its source, and the largest kind of ships can sail on it from the sea as far as London. This makes the Thames a very important river, for just as the sea is the great highway between different parts of the world, so navigable rivers are ready-made roads by which things can



FIG. 25.—SHIPPING on the THAMES at LONDON.

easily and conveniently be taken from place to place. Very few towns have become great or famous that are not built either on the seashore or on some important river. Towns where ships can load or unload their goods are called *ports*, and those, such as London, to which large sea-ships can come, are generally distinguished as *seaports*.

As you follow the course of the Thames on the map, you see that it becomes very much wider near its mouth, and that you can hardly say where the river ends and the sea begins.

Twice every day the water of the sea creeps in upon the land, and twice every day it draws back again. At *high tide*, as it is called, the water comes quite close to the cliffs and fields and houses of the shore, and at *low tide* a strip of sand and stones is laid bare. The sea is a little over six hours gradually rising, until it gets to the highest point it can reach, and a little over six hours falling again. When the tide is rising it rushes up rivers and pushes them back, so that for a few hours you see the water flowing away from the sea.

The Thames is a tidal river, and the tide makes its way as far as Teddington Lock, some miles above London. Twice in every twenty-four hours ships and barges coming from the sea are helped on their way by the water flowing up the river, instead of having to make way against the stream, and as the river is deepest and fullest at high tide, it can then float larger ships. The mouth of a tidal river is called an *estuary*. Sometimes two rivers have one

estuary between them, such as the rivers Trent and Ouse in the east of England, which together form the estuary called the Humber.

To find out from what parts of the country water comes to swell the Thames, you must begin at the first tributary marked on the map and trace it back to its source. Do the same with the other tributaries, and then draw a pencil line round the sources of all these streams. In the space you thus mark out, the land slopes in such a manner that all the springs that rise in it, and the rain that runs off its surface, must be carried at last by the Thames to the sea. The land which is *drained* by a river, or, in other words, which supplies it with its water, is called the *basin* of that river; so the space marked off by a dotted line on the map (p. 38) is the basin of the Thames.

The line drawn on the map separates the brooks and streams that go to swell one river from those that go to swell another river, and is called the *water-parting*. The land which slopes from the water-parting to the river is called the *watershed*.

You may sometimes hear people speak of the London basin, but you must not confuse

this with the basin of the Thames. When people dig deep into the ground in or near London they find clay; lower down they often find sand, and still lower down they come upon chalk. Now, because the layers of these rocks are slightly curved inwards, the name London Basin has been given to the space on which London stands, but you will see at once that the word basin is here used in quite a different sense, and has nothing to do with a river basin.

MAP EXERCISES.

1. Trace the course, and mark out the basins, of the Severn, the Trent and Ouse, which form the Humber, the Great Ouse, and the Mersey in England, and find out some towns on their banks.
2. Trace the course, and mark out the basins, of the Tweed, the Forth, the Tay, and the Clyde in Scotland.
3. Trace the course, and mark out the basin, of the Shannon in Ireland.

CHAPTER VIII.

GREAT BRITAIN AND IRELAND. PHYSICAL FEATURES.

THE coast-line of Scotland is even more eaten into than that of England. Bold headlands jut out into the sea, and long arms of the sea



FIG. 27.—A SALT-WATER LOCH.

stretch into the land, especially along the wild and rocky western coasts, where some of the narrow inlets of the ocean are almost surrounded

by land. These are called *firths* or salt-water *lochs*.

The coast-line of Great Britain is indeed longer than that of any other country of the same size in the world.

The shores of Ireland are also much cut up by the sea, especially in the west.

England is mountainous in the north and west, especially in that part of the west called Wales, and there are some hills in the south, but the greater part of the country has a wavy surface, and is not very high above the level of the sea.

Scotland, on the other hand, is a very mountainous country, and the northern and western parts, where the mountains are highest, are called the Highlands. The Highlands are divided from the lower lands or Lowlands by a chain of mountains called the Grampians; and Ben Nevis, the highest peak in this chain, is also the highest mountain in the whole of Great Britain.

If you have ever seen any mountains, you will know that they generally stand in chains or groups with hollows called *valleys* between them. It is through these valleys that the

waters flow, not gently as in low flat lands or



FIG. 28.—A WATERFALL.

plains, but bubbling and seething among the

rocks, and forming splendid waterfalls as they dash down the mountain-sides.

Most of the rivers of England flow gently, like the Thames, and are navigable during a great part of their course, but the rivers of



FIG. 29.—A LAKE.

Scotland rise so high among the mountains and reach the sea so soon, that ships cannot sail up them very far.

Many of the rivers of Scotland widen out into lakes. A *lake* is a deep hollow in the sur-

face of the land, where the water from many brooks and springs collects. A stream generally flows out at the lower end, as you can see in the picture. The chief river which falls into the lake, and the river which flows out of it, are often called by the same name, and this is what we mean when we say that a river widens out into a lake. There are many beautiful lakes among the mountains of England, Scotland, and Wales.

The lakes in Scotland are called *lochs*. You must not confuse these inland lochs, which are filled with fresh river-water, with those arms of the sea filled with sea-water, which are called salt-water lochs.

In mountainous parts there are walls of bare rock so steep that no soil can settle upon them, and here, as on the sea-coast, we are able to see some of the stones that are generally hidden from us by the grass and trees and flowers. In Wales, for instance, we should find slate; in the hills of central England, limestone; and in many parts of Scotland, granite. People often cut away stone from the sides of mountains and cliffs and send it to places where

it is wanted for churches, bridges, or paving-stones. Houses are often built of stone when it is found not far from the spot; but, if there is no hard stone near, while there is plenty of

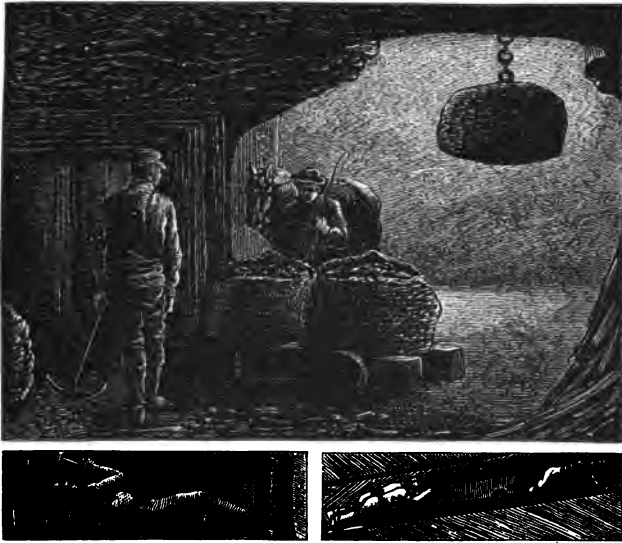


FIG. 30.—A COAL MINE.

clay just underneath the soil, as is the case near London, the houses are built of bricks or baked clay.

The stones and metals that people want often lie deeply buried under other rocks, and

can only be got by digging far down. A deep large hole or cavern which people make in the earth, so that they may be able to dig out some useful substance, is called a *mine*, and what they dig out is called a *mineral*. Great Britain is very rich in minerals, especially in coal and iron.



FIG. 31.—CRUMBLING ROCKS.

We have seen that the hard rocks of the earth are generally covered with soil. What is this soil, and where does it come from? You know the difference between the look of an old building and a new one. In an old church the

stones are worn into holes, moss and other plants have managed to take root on the walls, and the whole building is slowly crumbling into powder. This has been brought about by the air and the rain, and in this same way all the hard rocks and cliffs that are not covered over are wearing away like those in the picture.

When the stone has crumbled enough for small plants to get a footing, their roots help to break up the stone still further. As they die, their remains mingle with the crumbled powder, and the soft layer of soil becomes deeper. For soil is only crumbled stone mixed with the remains of plants, and since there are different kinds of stone in the rocks underneath there must also be different kinds of soil at the surface.

The soil of England is for the most part *fertile*, that is, corn and other useful plants will grow in it, and much of the land is cultivated. In the Highlands of Scotland there are large *moors* or tracts of stony ground, where little else but heath and stunted shrubs can grow, and many of the mountains are covered with forests of pines.

The soil of Ireland is exceedingly fertile, but



FIG. 32.

in many parts of the land there are *bogs*, or places where the ground is spongy and wet. The water is often hidden by a covering of bright green grass or moss, but if you attempt to walk on this, you may chance to sink deep into the soft black mud underneath.

The west wind, which comes to us from the open Atlantic Ocean laden with moisture, brings us a great deal of rain, and this plentiful supply of water makes the trees and flowers of the British Isles grow well, and keeps the grass green the whole year round.

MAP EXERCISES.

1. Find the Cheviot Hills, the Pennine Chain, the Cumbrian Group, and the Cambrian Mountains.
2. Find Lake Windermere and Lake Ulleswater in England, and Loch Lomond and Loch Ness in Scotland. Find Lough (lake) Neagh in Ireland, and name some of the lakes through which the Shannon flows.
3. Find some salt-water lochs in Scotland.
4. Find the principal moorlands of England: the Yorkshire Moors, Dartmoor, and Exmoor.

CHAPTER IX.

THE BRITISH EMPIRE.

IN many maps of England you will see the country marked out into parts of different shapes and sizes. These parts are called *counties* or *shires*. There are forty counties in England, and twelve in Wales, which used to be a separate country. A map representing our island a thousand years ago would look very different indeed from a map which shows what it is like to-day. In many places forests would be standing, which have since been cut down to make room for meadows, and gardens, and cornfields, there would be fewer roads of any kind, fewer villages and towns, and the country would be divided in a different way.

Indeed on maps of Europe that were made only a few years ago you will find that some of the countries have not quite the same shape

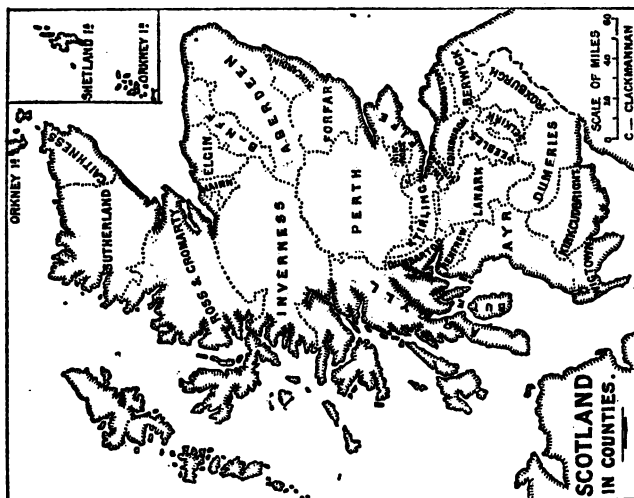
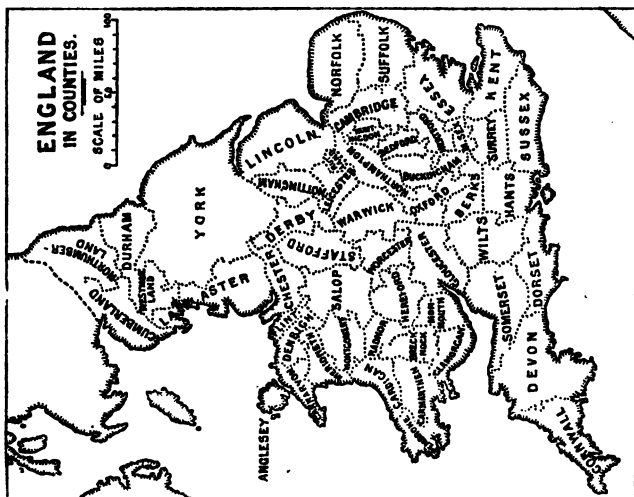


FIG. 33.

and size as they have on maps that are new. Land, for instance, which used to belong to France, now belongs to Germany, and land that used to belong to Italy, belongs to France, while on an older map of Europe the difference would be greater still.

Though you only learn at present from maps which show you what countries look like *now*, yet you must remember that while the mountains and rivers and the outlines of the land remain very nearly the same, changes take place in the divisions that are made by men.

Scotland and Ireland are now, like England, divided into counties, but Ireland is also divided into four parts called *Provinces*, and these provinces used to be separate kingdoms.

Since England, Scotland, and Ireland are now governed by one king or queen, we speak of the *United Kingdom of Great Britain and Ireland*.

Great Britain and Ireland and all the countries in different parts of the world that belong to England, together form what is called the *British Empire*.

In the beginning of this book is a map on

which the British *Foreign Possessions*, as they are called, are shaded black, and you can see that the English people rule over a great part of the world.

The most important country belonging to England is India, which is more than seventeen times as large as Great Britain. From very early times the people of Europe used to send ships to India to buy diamonds, spices, and precious stuffs. About 300 years ago some Englishmen settled in the land, so that they might be able to trade with the natives more easily, and by-and-bye the English spread over the whole country, as you will read some day.

Many places which now belong to the English had only savage men living in them, till people from England or from other civilised countries went to settle there. When men leave their own country to make a home for themselves in some other land, they are said to *found a colony*.

Some of the English colonies, such as those in Australia and New Zealand, were founded by English people; whilst others, such as Canada in North America, and the colonies in

the south of Africa, were founded by other nations, and passed into the hands of the English afterwards.

MAP EXERCISES.

1. The chief foreign possessions of England in Europe are—Malta and Cyprus in the Mediterranean Sea; Gibraltar, a town in Spain; and Heligoland, an island in the North Sea. Find these places on the map.

2. Learn the names of the countries belonging to England from the map in the beginning of this book, and try to find them on some other map.

3. Name some counties in England; in Scotland; in Ireland.

CHAPTER X.

EUROPE. SURFACE.

EUROPE has a greater length of coast compared with its size than any of the other continents, because the coast-line has to run round many large inland seas, such as the Mediterranean Sea in the south, and the Baltic Sea in the north-west, and because the shape of the land is so irregular, that many parts, such as Italy and the south of Greece, are almost surrounded by water. A piece of land almost surrounded by water is called a *peninsula*, from the Latin words *pene* almost, and *insula* an island. Since the winds that blow over the water bring rain to moisten and refresh the ground, it is a good thing for those who live in Europe that it is so much cut into by the sea.

A great plain, beginning in the east of England, stretches right across the central and north-eastern parts of Europe. To the north-

west of this low, flat land, lie the mountains of Scotland and Norway; to the south of it, all the countries are mountainous or hilly, and some of the mountains are very high. The chief mountains of Europe are the Alps, which cover the greater part of Switzerland, and stretch into France, Austria, and Italy; and the Pyrenees, which separate France and Spain.

In Italy, in Sicily, and in Iceland, we find mountains of a peculiar kind, called fiery mountains or *volcanoes*. From the top of a volcano, such as the one in the picture, a hole goes deep down into the earth, far deeper than any of our mines; and through this hole melted rock and cinders are from time to time thrown up into the air. Volcanoes sometimes remain quiet for a great many years, only sending out a puff of smoke now and then, and making a little rumbling noise; but from time to time there comes a tremendous explosion, when fields and gardens and houses may be buried under ashes or under the red-hot liquid called *lava*, which pours out from the *crater* or cup at the top, and hardens on the outside of the mountain. As volcanoes are found in many different places, they show

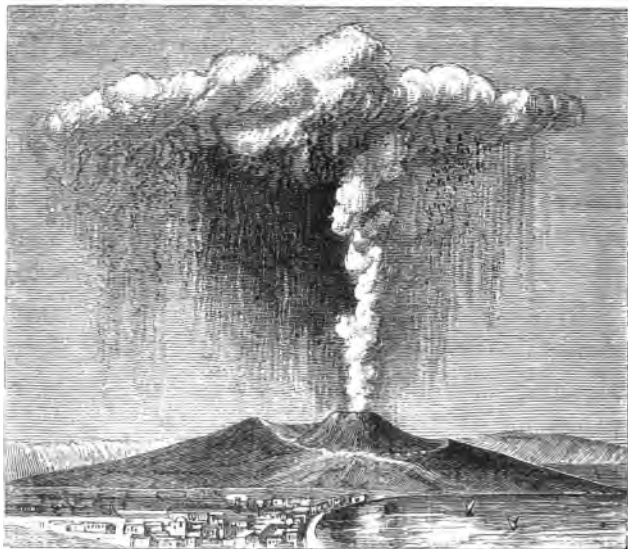


FIG. 35.—A VOLCANO.

us that the inside of the earth must be very hot indeed.

The most important volcanoes in Europe are—Mount Hecla in Iceland, Mount Vesuvius in Italy, Mount Etna in Sicily, and Stromboli near the coast of Sicily.

MAP EXERCISES.

1. Trace the coast-line of Europe, and find out the principal inland seas, bays, and gulfs.

2. Find out the principal islands and island-groups of Europe.

3. Name the peninsulas of Europe. Find out some peninsulas in other parts of the world.

4. What countries of Europe belong to the Great Plain ?

5. In what way is the coast-line of Norway like that of Scotland ?

6. Find the Apennines, the Caucasus Mountains, and the Ural Mountains.

CHAPTER XI.

EUROPE. DRAINAGE.

PERHAPS you may have noticed that the air is much colder on high ground than it is in the plains and valleys. Now on the tops of very high mountains the snow lies unmelted the whole year round. Here is a picture of



FIG. 36.—SNOW-COVERED MOUNTAINS.

some mountains in Switzerland, and the upper parts are entirely covered with snow.

The place above which the snow does not melt at all, even in summer, is called the *snow-line*. The snow-line is not at the same height all over the world, and in the hot countries of the Torrid zone you would have to climb much higher before you came to snow than in the temperate countries of Europe. The mountains of Great Britain are not high enough to rise above the snow-line.

From the large snow-fields which lie on the higher parts of the Alps, tongues or rivers of ice stretch down into the valleys. These ice-rivers are called *glaciers*, and they creep down the slopes of the mountains; but they move very, very slowly, so that you cannot tell by looking at them that they move at all. It is only by fixing sticks into them, and watching for weeks together how these sticks move onwards, that their advance can be proved. You see that the glacier in the picture ends in a stream of water, and this is because it is much warmer in the valleys than on the mountains, and so, when the glacier reaches the valley, the ice gradually melts away. The glacier-stream is usually very muddy, because there are many stones and large pieces of rock frozen into the

bottom of the ice, and these grind and wear away the rocks underneath as the glacier moves

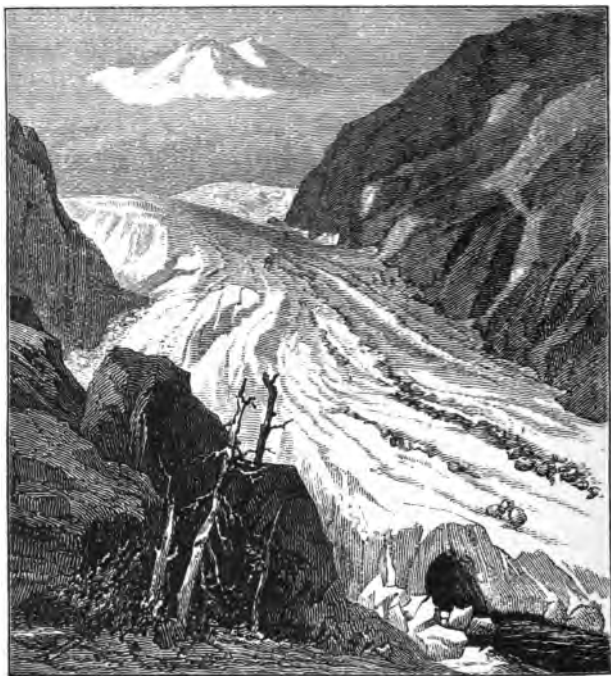


FIG. 37.—A GLACIER.

along, thus making a great deal of mud, which the stream carries away.

Two of the largest rivers of Europe—the

Rhine and the Rhone—have their source in glacier-streams of the Alps.

If you take a map of Europe and trace the course of these rivers, you will find that they divide into several branches before they flow into the sea. Now, why is this?

We have seen that the stream which flows from the lower end of a glacier is very muddy, but every river, no matter where it rises, carries down some sand and mud. The river forms mud by wearing the rocks away, as it widens and deepens the channel through which it flows, and mud is also washed into it by the rain that runs off the surface of the ground. When water is flowing very quickly, it can hold a great quantity of sand and mud, but when it flows more gently, the heavier sand and mud sink to the bottom. Most rivers drop the greater part of their burden when they reach the sea, and the current is stopped by meeting with the sea-water. Then the sand and mud form banks which gradually become higher and higher till they rise to the surface of the water, forming fresh land in places that used to be covered by the sea, and thus dividing the river

into several branches. These large tracts of flat land, formed by the mud which the rivers carry down, are called *deltas*, because some of them are shaped like the Greek letter Δ , delta.

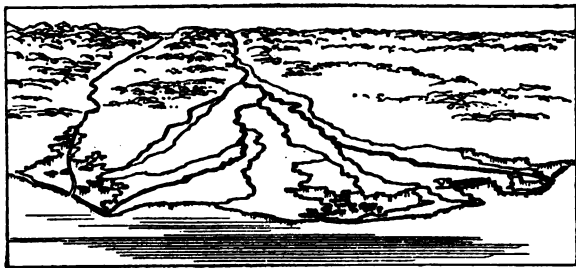


FIG. 38.—A DELTA.

Perhaps you wonder now that every river has not got a delta, since every river brings down *some* sand and mud. But there are rivers which flow so quickly that meeting with the sea-water does not stop them, and these are able to carry their mud far out into the deep ocean. Then there are other rivers, such as the Thames, in which the moving backwards and forwards of the sea-water, as the tide goes up and down the river, washes the mud away before banks can be made high enough to rise to the surface of the water. So, though you

will see many deltas on the map, you must not expect to find that every river has one.

The longest European river is the Volga. It rises in Central Russia and flows into a lake called the Caspian Sea, which is larger than England, Scotland, and Ireland put together. You can find out a great many rivers that flow into it, but you will not be able to find any river that flows out of it; and the lake would overflow its banks if the sun did not draw about as much water out of it as the rivers pour in.

The water of this lake is nearly as salt as that of the sea; but, before I can tell you why, I must remind you of what you read about rivers. Rivers are largely fed by springs; springs are made by the rain that sinks into the earth; and the rain often travels a very long way underground before it comes to the surface again as a spring.

Now there are all kinds of substances inside the earth, and amongst others a great deal of salt. As salt can easily be washed away by water, the springs that gush out of the earth are continually taking a little salt into the rivers, and the rivers carry it on to the sea.

There the salt stays, for the sun only draws pure water into the air, and everything that the water has brought with it remains behind. When rivers flow into a lake which has no river flowing out of it, the salt remains in the lake, and this is why the Caspian Sea and all lakes which have no outlet are more or less salt.

The Caspian Sea and some other salt-water lakes lie in a deep hollow of the land which is lower than the surface of the ocean, and for this reason no rivers can flow out of them.

MAP EXERCISES.

1. Name some rivers which flow into the Baltic Sea ; into the North Sea ; into the English Channel ; into the Bay of Biscay ; into the open Atlantic Ocean ; into the Mediterranean Sea ; into the Black Sea ; and into the Sea of Azov.

2. Name some rivers which have deltas.

3. Trace the course of the most important rivers ; mark out their basins, and find out some towns on their banks.

4. Find out some lakes in Switzerland.

5. Find out some fresh-water lakes in the Great Plain of Europe.

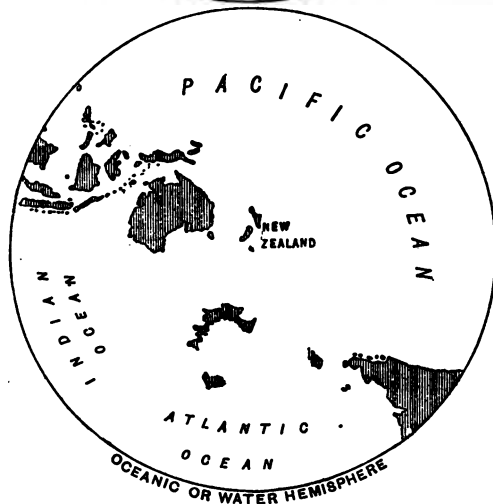


FIG. 30.—LAND AND WATER HEMISPHERES.

CHAPTER XII.

THE WORLD.

YOU have learned that there is much more water than land on the surface of the earth, and that there is more land in the northern than in the southern hemisphere. You see on the map (p. 73) that the earth can be divided into a land hemisphere and a water hemisphere, for if you place the globe so that you look straight down on to the British Isles, you will find that most of the land comes into sight, and if you place it so that you look straight down on to New Zealand, you will see most of the water.

But in trying to find out the way in which land and water are arranged on the surface of the earth, you must never forget that there is land under the water. Some parts of the solid earth sink into wide hollows; and these are filled with the sea, while only those parts that rise

high enough to stand out of the water form dry land.

The land in the eastern hemisphere runs across the globe from west to east, and the land in the western hemisphere runs down the globe from north to south. In both cases you can see that the chief mountain-chains run the same way as the land.

The mountains of the south of Europe form part of a great wall of high ground that stretches right across Europe and Asia from west to east; while the great plain of northern Europe is continued on the other side of the low Ural Mountains through the whole northern part of Asia.

In America, on the other hand, the mountain-wall runs down the western side of the continents, while the eastern parts of the land are, for the most part, flat and low.

Asia, which is as large as Europe and Africa taken together, seems to join hands with all the other large pieces of land on the earth. There is nothing which really separates Europe from Asia; Africa is joined to Asia by a narrow strip of land called an *isthmus*; the north-western part of America comes very

close to the north-eastern part of Asia, and a chain of islands stretches from the south-east of Asia to Australia.

Some of the highest mountains in the world are in the south of Asia, and many of the plains between the mountain-ranges lie far above the surface of the sea. High plains like these are called *table-lands*. There are some table-lands in the south and centre of Europe; but those of Asia are very much higher and very much larger than any in other parts of the world.

Though the shape of Asia is much more regular than that of Europe, yet its many peninsulas and inland seas make the coast-line long.

There are large rivers in Asia, but very few fresh-water lakes. The deep hollow in the land, of which I spoke when I told you about the Caspian Sea, takes up a great part of western Asia, so that many rivers lose themselves in salt-water lakes.

Some parts of Asia, especially those which are not very far from the sea, are exceedingly fertile; but in other parts there are immense tracts of sandy or stony ground, where no

rain falls and nothing grows. These are called *deserts*. There are no deserts in Europe.

One of the largest and dreariest deserts in the world is the Great Sahara, in the north of Africa. People know less about Africa than about any of the other continents, and you will see that a large part of the interior is left blank on a map. Of late years, however, many Europeans have travelled in central Africa to try and find out more about it, and they have discovered that there are enormous fresh-water lakes near the Equator, and that the water of these lakes is carried by the river Nile to the Mediterranean Sea. The map will show you that Africa has a much shorter length of coast, compared with its size, than either Europe or Asia has.

South America is very much like Africa in shape, and, like Africa, it is not much eaten into by the sea; while the irregular shape and large inland seas of North America make that continent look something like Europe.

A great part of both North and South America is flat and low. The plains of North America are in many places covered with tall grass and flowers, and then they are called

prairies; some of the plains of South America, called *selvas*, are noted for their large, dense forests.

Both these continents have many great and important rivers, and the fresh-water lakes of North America are the largest in the world.

North America and South America are joined by the Isthmus of Panama. The strip of land north of this isthmus is generally called Central America.

The largest island in the world is Australia, the central parts of which are not very well known. There are hills and mountains near the coasts, and sandy plains further inland. The country is not well watered; some of the rivers never reach the sea, because their water is soaked up by the sand, while others are quite dried up in the summer months of the year.

Besides the islands which lie near the large masses of land, there are many groups of small islands in different parts of the world, and especially in the Pacific Ocean. Some of the islands are mountainous; others are flat and low, and many of these are made of coral, which has been built up by millions of tiny

animals on the tops of mountains under the sea.

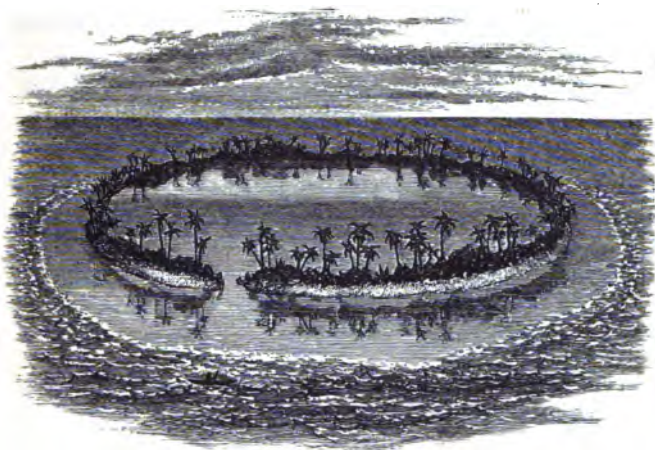


FIG. 40.—CORAL ISLAND IN THE PACIFIC.

MAP EXERCISES.

1. Take a map of Asia, and find out the names of some of the countries.
2. Trace the coast-line, and find out the inland seas, bays, gulfs, and straits, and the principal island groups.
3. What are those mountains called which lie to the north of India? Find some rivers that rise there, and trace their course.

80 GEOGRAPHY FOR LITTLE CHILDREN.

4. Take a map of Africa, and find out the names of the countries which border on the Mediterranean Sea.

5. Trace the course of the Nile.

6. Take a map of America, and find out the names of some of the countries.

7. Trace the coast-line, and find out the inland seas, bays, gulfs, and straits, and the principal island groups.

8. Find the Rocky Mountains and the Andes.

9. Trace the course, and mark out the basin, of the Mississippi, the St. Lawrence, the Orinoco, and the Amazon.

CHAPTER XIII.

CONCLUSION.

I HOPE that what you have now learnt will make you care to know more about *geography*, for that is the name people give to lessons about the earth. I daresay that you are fond of hearing about new places, and that you like to know where things come from, and what the plants and animals and people are like in countries that are far away. Now, if you look on the map for the places you hear and read about, you will learn a great deal of geography in a very pleasant way, and some day, when you read the story of what happened on the earth before our time, you will understand how the countries come to be divided as they are at present, which towns are of the most importance, and what changes people have made on the earth.

You must remember, however, that the

part of the earth which concerns us most is the place where we live, and that if we want to understand what we read of foreign countries, we must begin by understanding the things that are round about us. Notice, for instance, whether the land near your home is hilly or flat, what the rocks are like, wherever they can be seen, where the streams come from and which way they flow ; for it is from what we see with our own eyes that we shall gain the truest knowledge about the beautiful earth on which we live.

THE END.

INSTRUCTIVE PICTURE BOOKS.

I.

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